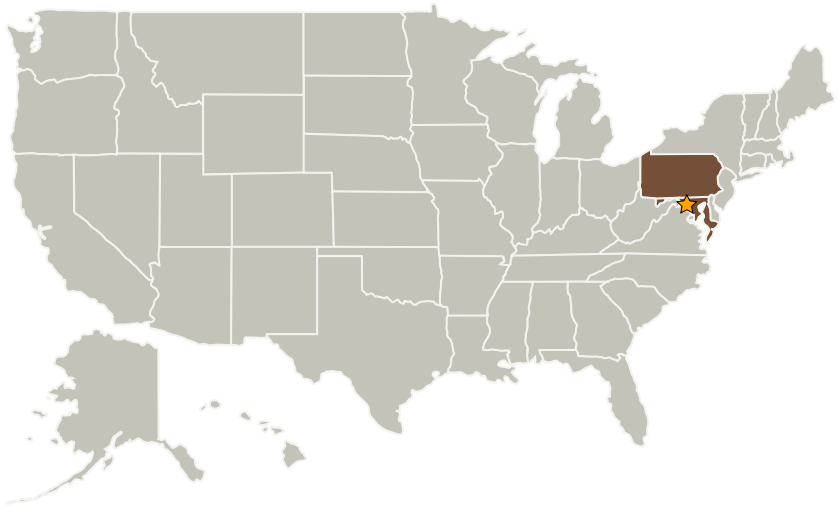
Pressure Controlled Heat Pipe for Precise Temperature Control, Phase II

Completed Technology Project (2007 - 2009)

Project Introduction

The principal Phase II objective is to refine and further develop the prototype PCHP into a useful thermal management tool. The Phase I program established the feasibility of thermal control an axially-grooved heat pipe with a variable-volume reservoir. The follow-on Phase II program will address control system optimization, component longevity, reductions in mass and power, and show that the device can be flight qualified. It is expected that the Phase II results will bring the PCHP to TRL 6: Prototype Demonstration in a Relevant Environment.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Goddard Space Flight Center(GSFC)	Lead Organization	NASA Center	Greenbelt, Maryland
Advanced Cooling Technologies, Inc.	Supporting Organization	Industry	Lancaster, Pennsylvania

Primary U.S. Work Locations	
Maryland	Pennsylvania

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Goddard Space Flight Center (GSFC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Transitions

December 2007: Project Start

December 2009: Closed out

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Technology Areas

Primary:

- TX14 Thermal Management Systems
  - TX14.2 Thermal Control Components and Systems
    - TX14.2.3 Heat Rejection and Storage